Tuberculosis: A personal commentary

Gladys C Fryer MD*

Tuberculosis is another of those diseases from which our attention has been diverted in recent decades, and which may now come back to plague us. I refer to the timely warning in Dr Frankel's report and Dr Reppun's editorial comment in the Hawaii Medical Journal *of December 1991.*

As a child in England, I remember seeing a little boy on the beach with his family. He could not walk, and he had a sinus over his hip joint. We were allowed only within shouting distance. I was told he had tuberculosis of the hip; this must have been bovine tuberculosis, a variety that disappeared for many years but we are now warned may be returning[1].

With the advent of antibiotics after World War II, and especially Streptomycin, it seems our guard was lowered—TB could be treated certainly, instead of uncertainly, by 6 months or more in a sanatorium. At present, however, Streptomycin has become unavailable in the U.S., and PAS (para-amino-salicylic acid) temporarily so[2].

In Melbourne, Australia, where I studied, all medical students with negative Tb skin tests were given BCG (Bacille Calmette-Guerain) which blocks *M. tuberculosis* infection and gives the recipient a positive Tb skin reaction. (BCG also is widely used in Scandinavian countries. It has not been used in the United States, where the conversion of the skin test is valued as a diagnostic factor.)

In the 1950s and 1960s, Dr Malcolm Bolton was medical officer to aborigines in Malaya. These numbered about 50,000 people in 3 main tribes; some, the Negritos, were living in very remote jungle areas. Most could be reached only by helicopter, and Bolton himself assisted in clearing jungle landing sites for Royal Australian Air Force helicopters to land. It took 2 helicopters to carry portable X-ray equipment and to take sick aborigines back to the Rumah Sakit Orang Asli (aboriginal hospital).

At each jungle visit all aborigines who had not been seen before were given a Tb skin test, BCG inoculation, and a chest X-ray. Simultaneous administration of BCG covered individuals who did not come out of the jungle for reading of the skin test.

The graph of the decrease in incidence of Tb in aborigines during Bolton's care was spectacular. Dr Bolton almost certainly saved this race from extinction.

In order to obtain a government job in Malaya (including that of a teacher), it was necessary to have a chest X-ray negative for Tb. For this reason it was very common for a partial or complete pulmonary lobectomy to be performed on a patient with quiescent and localized disease.

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I was privileged to be invited to attend the weekly pathology sessions at the Lady Templer Hospital conducted on surgical specimens by Dr J B Duguid, Professor*Emeritus* of the University of Durham—a heaven-sent education.

Despite tuberculosis being so common, a middle-aged Chinese woman was once referred to me for evaluation of her heart disease because of an episode of hemoptysis. A chest X-ray showed classic lesions of Tb, which we were able to treat. She had no cardia lesion.

Considering this background, while I was living and working in Hawaii, I was saddened when the Health Department had to discontinue its mobile chest X-ray service some years ago. It is to be hoped that this public health service may possibly be resumed.

Tuberculosis is an old scourge that is becoming a new scourge. Though it occurs particularly often in patients with impaired immune systems such as in AIDS patients, the age-old pathogenic mechanisms must still be suspected, eg the young baby with tuberculous meningitis acquired from the grandfather who has a chronic productive cough.

The *Mycobacteria* are intensely interesting. In the work of the Research Unit at Sungei Buloh Leprosarium in Malaya, it was discovered that patients with *M. leprae* infections were more susceptible to other *Mycobacteria*, eg *M. tuberculosis* and/or *M. ulcerans*.[3] Perhaps there is also a special association between these *Mycobacteria* and HIV infection since we now see severe infections with the a typical *Mycobacteria* in such patients, eg fulminating infections with *M. avium cellulare.*

In Africa, tuberculosis is one of the most common and severe diseases associated with HIV infection. The World Health Organization now recommends administration of BCG at birth to infants in Rwanda and other countries where the risk of TB is high[4]. This practice has been found to be effective; side effects seldom occur. There is a possibility that vaccinating HIV-infected infants with BCG may also protect against atypical *Mycobacteria.*

One can argue for consideration of more widespread administration of BCG in the U.S. to medical staff, newborn infants of AIDS mothers, contacts of AIDS patients and to intravenous drug users. Extension even to include Mantoux-negative individuals may eventually be desirable.

Hawaii has led the country in other health matters; perhaps it could do so in this regard also!

REFERENCES

1. Fanning, A and Edwards, S. Mycobacterium bovis infection in human beings in contact with elk (Cervus elaphus) in Alberta, Canada. *Lancet.* 1991;338,1253-55.
2. *MMWR.* 1991;40:41;715.
3. JHS Pettit. Personal communication.
4. BCG Vaccination & Pediatric HIV Infection-Rwanda. *MMWR.* 1991; 40:48.

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[Since Dr Fryer submitted the tuberculosis article for publication in the Journal, *we have received the following from Dr Ignacio of the DoH and find it appropriate for inclusion herewith/Ed]*

Senate Bill 3306 was passed by the Hawaii State Legislature and was signed into law by Governor Waihee on June 18, 1992. The law amends the HIV confidentiality statute and permits physicians in Hawaii to report HIV positivity to the Department of Health (DoH) in:

(1) Persons with tuberculosis.

(2) Persons with a tuberculin skin test of ≥5mm induration by Mantoux technique.

Physicians may wish to report their co-infected patients to the DoH for consultation on patient management or to ensure that the patient is not lost to follow-up.

DoH record-keeping procedures have been modified to ensure that the identity of co-infected patients is protected. Physicians who choose to report will be requested to fill out a special case report form. This form is in the process of being printed and will be mailed to every licensed physician in the State.

Physicians who prefer to report by phone may call 832-6000. This is a private line at the DoH which will only be answered by the TB nurse consultant or the TB registry clerk. No other DoH personnel will be allowed to take case reports.

Should physicians have any questions regarding the medical management of their patients, they should call the Chest Clinic Physicians of the Tuberculosis Program at 832-5731. Reports of co-infected persons should be directed to the TB nurse consultant or the TB registry clerk. They can be reached at the same telephone number.

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DoH/Tuberculosis Control

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